

All COR ISO Recommendations

Latent Condition, Seismic and ISS

Friday, October 12, 2012 11:48:57 AM

Type	Rec #	ABU	Unit	Year (I/R)	LC or ISS Question #	LC Question ISS Question Seismic Area	Observation	Recommendation	Resolution	Duc Date	Assigned To	Status
Latent Condition	562	D&R	#32 PLANT	2009	1-4	Are the worker's knowledge, skills, and abilities adequate to perform the job safely?	Initial training/Job Break-in Training/Job Panels/Solo Test are used to develop employee knowledge and skills. The team feels that this initial training is adequate to perform the job safely. Concern that CBT Refresher training may not be adequate to maintain skill level.	Consider supplementing the CBT Refresher training with field training with experienced operators.	Operators and Head Operators currently have the capability and resources (EOM, Trainer materials) to supplement CBT Refresher training. The skill achieved during New Job Break In comes from completing situations and tests which can be requested from the Trainer. No action required.	6/18/2010	Peterson, Paul M.	Completed
Latent Condition	563	D&R	#32 PLANT	2009	2-35	Is equipment and instrumentation clearly labeled and are the equipment and instrument tag numbers used in the procedures?	CHAMP project resulted in Honeywell DCS tags labeled "Plant 42" whereas some field equipment still references "Plant 32." Concern is that this may be confusing.	Consider reviewing equipment and instrument labeling to minimize or eliminate any confusion resulting from the change in plant numbering, e.g., "Plant 32" v. "Plant 42." Consider review of alarm check procedure to ensure no similar confusion/ambiguity exists.	Reviewed and relabeled as needed	6/18/2010	Wolden, David W.	Completed
Latent Condition	564	D&R	#32 PLANT	2009	3-13	Are all equipment labels (e.g., vessels, piping, valves, instrumentation, etc.) easy to read (clear and in good condition)?	Concern exists that equipment labeling may not be clear and legible.	Consider review of line labeling on chemical injection routings, V-3211 plot limit. Consider review of condition of all equipment labels.	Reveiued and relabeled as needed	6/18/2010	Wolden, David W.	Completed
Latent Condition	565	D&R	#32 PLANT	2009	3-22	Are pipelines and electrical conduit clearly labeled at points where they become invisible (e.g., routed underground)?	Concern is that the electrical switch boxes are not clearly labeled.	Consider review of labeling of electrical switch boxes near P-3210/A and T-3142.	At the Richmond Refinery we don't mark the pull boxes. All the conduits that enter into the ground around T-3142 and P-3210 is marked with a steel tag at ground level that tells you where they come up at. The off/on/auto switch box at P-3210 is marked OK.	6/18/2010	Vink, Anthony M.	Completed

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ISS	6294	D&R	#32 Plant	2009	4B5	Reducing vibration?	V-3206 Atmospheric Condensate Drum is known to have high vibration causing pipe damage. Possibility for other equipment damage and personnel injury from steam/condensate exists.	Investigate cause of high vibration in V-3206 and consider means to eliminate cause or mitigate hazards.	<p>Reassigned from Ben Hulse to Kurt Gish on 6/14/10.</p> <p>-7/22/10 ~ A test piping system/exchange was installed on the equipment to determine whether cooling the condensate that goes from V-3205 to V-3206 would solve the vibration issues. The test was performed on 6/27/10 and confirmed that cooling this flow does solve the vibration issues, however it also caused issues with the level control system. John Greenfield has been assigned to design a new cooling system for this flow that will address the vibration issues and maintain proper level control. John is working to get the necessary tie-ins added to the shutdown work list. The full project will be completed after the 3Q2011 shutdown.</p> <p>7/27/10 M. Crow - Shutdown required to complete action item: due date changed to 1/31/12.</p> <p>10/11/11 K. Gish ~ Background: The concern cited in the Inherently Safer Systems review is "V-3206 Atmospheric Condensate Drum is known to have high vibrations causing pipe damage. Possibility for other equipment damage and personnel injury from steam/condensate exists". The complex vibration issue was studied by the assigned Engineer and a Chevron Utilities Specialist and a set of possible solutions were developed, all of which would require vessel and/or piping modifications that would require a shutdown of the system to implement. Because the opportunity to make these</p>	6/30/2012	Raiford, Alison L.	Completed

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									<p>kinds of modifications only occur every 5 years, during the plant shutdown, the Engineer developed a test in order to verify that the theorized source of vibration and the effectiveness of the proposed solution was verified. In June of 2010 a test was performed and did verify that the vibrations were caused by condensate flashing across a control valve and/or as it entered the vessel. The test also successfully verified that the flashing could be eliminated by cooling the condensate upstream of the control valve. Although the test was successful, due to the pressure drop in the system, an adequate flow rate could not be maintained and level controls became erratic. It was determined that a permanent fix would require tie-in piping connections that could only be performed during a shutdown.</p> <p>Plan Forward:</p> <p>The tie-in jobs were added to the 3Q2011 shutdown scope and Engineering Work Orders created for this work to be performed during the shutdown. The project work outside of the shutdown tie-in work was assigned to a project team. The project team reviewed the test data and performed engineering to properly size a heat exchanger, perform flow calculations, perform structural/civil design, and designed a new level control/flow control scheme. The condensate system tie-ins are being performed during the 3Q2011 shutdown as planned. The installation, connection, and start-up of the heat exchanger</p>			

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									and level control system will begin after the shutdown and will not be completed until March 2012 due to the long lead time for the Exchanger, which is due to arrive in mid-February.			
									There are two EWO's and two MOC's for this project. The first EWO is 5255 and MOC is 22463, for the Shutdown tie-in work, and the second EWO is 6317 and MOC is 24096, for the installation of the new exchanger.			
									Extended Due Date to April 2012 in accordance to work plan. (MXEW)			
									Status 5/1/12 Mark Crow (MXEW) per Kurt Gish:			
									The equipment has been installed. Next step is to complete procedures, training, and to commission equipment. Drawings and associated PSI will be updated to web. Anticipate completion by end of June.			
									Extended Due Date to June, 30 2012 in accordance to work plan.			
									Reassigned from Kurt Gish to Alison Raiford by Mark Crow on 5/21/12.			
									System is in service and MOC 22463 is through stage 2 awaiting PID update to web PMPE 6/14/12.			
									MOC22463 through stage 3! PMPE			

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Seismic	515	D&R	#32 PLANT	2009		V-3206	Anchor bolt thread engagement with nuts may be inadequate. At least one plate washer is to small for base plate bolt hole.	Evaluate thread engagement and need for larger washer by performing seismic calculations to check uplift.	Al Greene analyzed V-3206 and found that the existing anchor bolt thread engagement and washer size/thickness were adequate as there is no uplift or anchor bolt tension.	6/18/2010	Lee, Gerald W.	Completed